

Title (en)  
Optical modulation device.

Title (de)  
Optische Modulationsvorrichtung.

Title (fr)  
Dispositif de modulation optique.

Publication  
**EP 0240010 A1 19871007 (EN)**

Application  
**EP 87104841 A 19870401**

Priority  
• JP 7586786 A 19860402  
• JP 7586886 A 19860402

Abstract (en)  
An optical modulation device comprises a pair of substrates respectively having electrodes thereon arranged so as to form a pixel at an intersection thereof, and an optical modulation material disposed at the pixel. The pixel has regions of the optical modulation material having mutually different threshold characteristics.

IPC 1-7  
**G02F 1/133**; **G02F 1/137**

IPC 8 full level  
**G02F 1/1337** (2006.01); **G02F 1/141** (2006.01); **G09G 3/36** (2006.01); **G02F 1/1333** (2006.01); **G09G 3/20** (2006.01)

CPC (source: EP US)  
**G02F 1/133753** (2013.01 - EP US); **G02F 1/141** (2013.01 - EP US); **G09G 3/3637** (2013.01 - EP US); **G02F 1/133371** (2013.01 - EP US); **G02F 2203/30** (2013.01 - EP US); **G09G 3/2011** (2013.01 - EP US); **G09G 3/2014** (2013.01 - EP US); **G09G 3/207** (2013.01 - EP US)

Citation (search report)  
• US 4563059 A 19860107 - CLARK NOEL A [US], et al  
• EP 0083822 A1 19830720 - PHILIPS NV [NL]  
• WO 8606506 A1 19861106 - AMERICAN TELEPHONE & TELEGRAPH [US]  
• US 4247174 A 19810127 - WALTER KARL-HEINZ  
• DE 3500166 A1 19850718 - CANON KK [JP]  
• JAPANESE JOURNAL OF APPLIED PHYSICS, vol. 23, no. 10, October 1984 H. ORIHARA et al. "Switching Characteristics of Ferroelectric Liquid Crystal DOBAMBC" pages 1274-1277 \* TOTALITY \*

Cited by  
US5495352A; US5644372A; EP0308268A3; EP0402984A1; CN107209431A; EP0545400A3; US5519411A; DE3711823A1; US4824218A; GB2293260A; GB2293260B; US5838292A; EP0621580A1; US5532713A; FR2637407A1; EP0379810A3; US5157524A; EP0595219A3; US5654784A; EP2453302A3; EP0831358A3; EP0831359A3; GB2301928A; GB2301928B; EP0584963A3; US5552914A; US5604613A; WO9527920A1; WO9804953A1; KR100276617B1

Designated contracting state (EPC)  
BE CH DE ES FR GB IT LI NL SE

DOCDB simple family (publication)  
**EP 0240010 A1 19871007**; **EP 0240010 B1 19921028**; DE 3782353 D1 19921203; DE 3782353 T2 19930408; ES 2035825 T3 19930501; US 4796980 A 19890110

DOCDB simple family (application)  
**EP 87104841 A 19870401**; DE 3782353 T 19870401; ES 87104841 T 19870401; US 3056987 A 19870327